

Challenges and Debates

Sydney R. Coleman, MD ^{a,b}, Samuel Lam, MD, FACS ^c, Steven R. Cohen, MD ^{d,e}, Behnam Bohluli, DMD, MS ^f, Foad Nahai, MD ^{g,*}

KEYWORDS

• Fillers • Fat grafts • Microfat • Nanofat • Millifat

KEY POINTS

- Experts discuss the role and the particulars of fat grafting and fillers.
- The experts explain their preferences for when to use fillers versus when to use fat, how much of the grafted fat takes, the number of fat graft sessions, types of fat grafts, and the effect of fat on skin quality.
- Finally, the experts discuss the future of fat grafting.

To use or not to use

Behnam Bohluli: How do you make the decision to use fat or filler in a specific case?

Sydney R. Coleman: I use filler when I treat patients that are not ready for fat grafting.

Samuel Lam: Fat grafting and fillers are 2 ways to restore volume. I have progressively moved toward fillers since the advent of disposable microcannulas. I still perform fat grafting often, but I think every surgeon must know and convey to a patient the limitations of fat grafting and fillers. When we understand the pros and cons of each method, then we can more properly decide which one would be better suited for a patient. The pros of fat grafting include the following: fat grafting is permanent and holds remarkably well, fat grafting can be less expensive given the global nature of the fill

(without having to spend per syringe on product), and fat grafting can make the skin in treated areas look smoother a few years after transfer (although I do not sell this to a patient, I have witnessed these favorable skin changes). The cons of fat grafting include greater initial expense, a week or so of downtime, variable resorption, bioactivity of the product in that one should not gain substantial weight afterward or the fat will look too full, and failure to improve areas like nasolabial groove. Fillers have their own pros and cons. The pros of fillers include immediate gratification, minimal downtime, buy as you go (buy per syringe what you can afford), and accurate filling that holds well (and can last years after a few rounds of treatments). Cons of fillers include risk of Tyndall effect around the eyes, costly with number of syringes needed to approximate fat grafting, need for multiple rounds to hold like a fat graft, rare risk that the product could become infected, and relative firmness of product (depending on the product). With all of these pros and cons in mind, I help a patient tailor what would be best suited for that individual. The ideal patient for a fat transfer is someone older (>40 years) that would benefit from the quantity of fat needed and who is relatively stable in weight. In addition, perhaps if the individual is already undergoing blepharoplasty, rhinoplasty, or facelift, then the downtime and cost of anesthesia can be mitigated. I always explain to every fat transfer patient, however, that he or she will need fillers to touch up some of the resorption of fat (around 6 months to a year) and also probably annual filler touch ups to maintain against further aging. The best filler candidate is someone who is perhaps younger who does not need too much filler or older with medical issues that would preclude surgery. Further, that individual may not be able to experience downtime or has a more limited budget to start and would like just a little targeted filler. In general, I am not a huge fan of using fillers and then fat grafting because fillers will continue to abate over a long period, and putting fat on top of fillers may lead to disappointment if the filler is dissipating after the fat transfer.

Disclosure Statement: Steven R. Cohen is a consultant, shareholder, and co-inventor (LipoLoop and Injectable Tissue Replacement Kit) for Millennium Medical Technologies. He is a consultant for Tulip Medical, Inc. and he receives royalties from Tulip for his role as co-inventor of FatPress. He is a consultant and minor shareholder of Cytori, Inc. The authors have nothing to disclose.

^a TriBeCa Plastic Surgery, 44 Hudson Street, New York, NY 10013, USA

^b Hansjörg Wyss Department of Plastic Surgery, NYU School of Medicine, NYU Langone Medical Center, 307 E. 33rd Street, New York, NY 10016, USA

^c Lam Facial Plastics, 6101 Chapel Hill Boulevard, Suite 101, Plano, TX 75093, USA

^d FACES+ Plastic Surgery, Skin and Laser Center, 4510 Executive Drive, Suite 200, San Diego, CA 92121, USA

^e Plastic Surgery, University of California, San Diego, 200 W. Arbor Drive, M/C 8890, San Diego, CA 92013-8890, USA

^f Department of Oral and Maxillofacial Surgery, University of Toronto, 124 Edward Street, Toronto, ON M5G 1G6, Canada

^g Plastic Surgery, Emory University, The Emory Aesthetic Center, Suite 640, 3200 Downwood Circle, Atlanta, GA 30327, USA

* Corresponding author.

E-mail address: fnaha02@emory.edu

Steven R. Cohen: I generally recommend fat grafting (but as a technique called injectable facial regeneration) in patients requesting fillers in more than one location and in patients undergoing facelift surgery. My rationale is based on a concept I have been thinking about for some time. We are trophic for the first 22 years of life, and then our tissues decay. In looking at the face, as volume decays to a point that it bothers the patient, we offer fillers. Instead of using fillers, which look good but have no impact on the rate of tissue decay, I offer them injectable facial regeneration. If they have associated sun damage, we recommend the appropriate laser or peel or skin care based on the severity of the sun damage. If laxity is present, we recommend the appropriate treatment based on severity as well, ranging from energy-based devices to surgery of different magnitudes, depending again on the degree of laxity and the anatomic findings. We recommend fat grafting using millifat (parcel size 2.4 mm and less), microfat (1.2 mm and less) and nanofat (800 μ m and less), as we are replacing the losses in tissue mass with similar-sized tissue grafted, much as a filler into the specific anatomic compartments of loss.

Longevity

Foad Nahai: Some surgeons feel that fat grafting does not survive in hypermobile parts of the face, such as the upper lips, and nasolabial folds. In these cases, fat grafting is used as so-called short filler. Do you agree? Do you believe grafted fat is permanent?

Sydney R. Coleman: Although fat grafting is less predictable in the periorbital region, I have seen remarkable corrections that lasted more than 15 years.

Samuel Lam: I believe the portion of fat that survives continues to thrive. Over time, there can be some loss of native fat from ongoing aging that may make someone think that the transplanted fat goes away, but I believe it is the native fat that dissipates and not the transplanted fat. Just like a skin graft, once the blood supply takes, then the fat graft becomes permanent. How do I know this? I have taken grafted fat out of a lip to correct its appearance 10 years after the procedure, so I know fat can survive in hypermobile areas and truly survive as an actual graft. That being said, I do believe that hypermobile areas have a higher rate of resorption, and I always undersell what fat grafting can accomplish in those regions.

Steven R. Cohen: In the lips, roughly 15% of the fat can be expected to survive long term. In the nasolabial folds, if the fat is placed as millifat onto the periosteum of the pyriform compartment, then the folds improve long term (at least 2 or more years). If the fat is placed in the superficial subcutaneous tissue, I think fat is lost to a greater extent. In the deep compartments, such as the buccal space, we estimate 75% fat graft survival at 2 years. However, it is not about fat graft survival only, it is also about what the fat and its components are doing to the surrounding tissues as they are present—they are regenerating blood supply and reversing architectural changes seen in elastin and collagen and likely impacting cellular health.

Size of graft material

Behnam Bohluli: When do you prefer to use nanofat grafting and when to use microfat grafting?

Sydney R. Coleman: Although I personally have never used the product, I think it may have some scientific basis.

Samuel Lam: I have tried several types of fat grafting and, in my opinion, most types of grafted fat survive in a comparable way. One caveat for me is that I feel that excessive tumescence fluid and lidocaine may decrease survival or it may just swell the fat cells to make it harder to determine the amount transferred. I prefer to perform fat transfer under general anesthesia without the addition of anesthesia to the donor and the recipient areas to preserve the estimate of accurate fat volumes.

Steven R. Cohen: I like microfat for total forehead rejuvenation, perioral rejuvenation, and hands and in superficial compartments of the face. I like microfat for tear troughs, lateral orbital depressions, and, in some cases, supratarsal fold deepening. I like nanofat (each type is different) with Tulip (Tulip Biomed, Inc., San Diego, CA) for intradermal use, SNIFF, microneedling, and, in some cases, mixed into the other millifat and microfat grafts, as nanofat has more matrix and more growth factors. We also use nanofat for superficial injections and in a liposomal transport compound for topical care in conjunction with fractional laser resurfacing.

Number of treatments

Foad Nahai: There is a conception that fat grafting should be repeated at least 2 or 3 times for longstanding results. Do you agree? How do you advise your patients?

Sydney R. Coleman: I tell every patient that I would prefer to avoid overcorrection. Therefore, they should be prepared for a secondary treatment of adding too much, which is much easier to correct than overcorrection.

Samuel Lam: I feel that fat grafting is a 1-time treatment because additional fat grafting can lead to an overfilled face. Using a bed model, I liken fat grafting to a mattress (or foundation), fillers like a duvet, and botulinum toxin and laser like the sheets. In other words, fat provides a wonderful foundation to build up a face but cannot accurately fill tiny surface defects. In addition, because it is a bioactive substance in which weight changes can impact the result, I like to have fillers as a way to buttress against the chance of weight gain. Further, most individuals continue to age, and fillers provide a way to easily maintain a fat transfer result. Of course, one argument against hyaluronic acid–based fillers is that they are only temporary. I strongly disagree. After a few rounds, I have seen these products sustain a longevity that I would equate with permanence minus further aging.

Steven R. Cohen: I agree that each time you fat graft there is a cumulative effect with more angiogenesis and more long-term volume. I explain that anytime we use the body's own tissues, the effects are variable but always have benefit. For instance, no filler produces long-term angiogenesis if at all. Growth factor effects are present in everyone but also depend on the degree of damage. I suspect that repeat treatments will be the norm for all aspects of regenerative medicine including facial aesthetics.

Extensive overcorrection

Behnam Bohluli: In this patient, extensive overcorrection is done. She feels that there is no change after 2 years. She wants to revise this overfilling. What can be done? What techniques can be used for graft reduction (Fig. 1)?

Samuel Lam: This is hard to fix. What I first need to determine is if the individual also had fillers. Sometimes patients forget.

Download English Version:

<https://daneshyari.com/en/article/8696660>

Download Persian Version:

<https://daneshyari.com/article/8696660>

[Daneshyari.com](https://daneshyari.com)